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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/579,444

05/15/2006

Manfred A. A. Lupke

SWH 12 221-1US

7844

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03/27/2008

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EXAMINER

LEYSON, JOSEPH S

ART UNIT

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1791

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,444	<b>Applicant(s)</b> LUPKE ET AL.	
	<b>Examiner</b> JOSEPH LEYSON	<b>Art Unit</b> 1791	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings (i.e., the replacement sheet for figs. 1 and 2) were received on May 15, 2006. These drawings are acceptable.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 112 (fig. 8) and 146 (fig. 9).

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities: the preliminary amendment filed on May 15, 2006 replaces the paragraph at line 30 on p. 15 with an amended paragraph, which is NOT a complete paragraph. Furthermore, the replacement paragraph recites "Pump 31" which should be changed to --Pump 134-- as

understood from fig. 9. Applicants should resubmit this amendment with a COMPLETE paragraph and with the change mentioned above.

Appropriate correction is required.

***Claim Objections***

4. Claims 5 and 6 are objected to because of the following informalities: in claim 5, lines 3-4, "of first cooling stage" should be changed to --of said first cooling stage-- for antecedent basis clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites "the vacuum" which lacks antecedent basis making it unclear to what it refers. The examiner suggests making claim 14 dependent upon claim 13 which first introduces vacuum means.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupke et al. (US 4,510,013) in view of Chan et al. (US 4,789,327).

Lupke et al. (US 4,510,013) teaches a pipe molding system for producing plastic pipe, said system including a plurality of moving first mold block sections 16 and second moving mold block sections 16, the first mold block sections closing with the second mold block sections to form a moving mold tunnel (i.e., figs. 1-2c), means 23 for feeding molten plastic to the first and second mold blocks sections to form the plastic pipe and a cooling plug 70. However, Lupke et al. (US 4,510,013) do not disclose the cooling plug as recited by the instant claims.

Chan et al. (US 4,789,327) teaches a cooling plug 51, 52 for setting the plastic pipe in a moving mold tunnel, said cooling plug being divided into a first stage and a second stage, said first stage including a separate cooling circuit and control arrangement for removing sufficient heat from the plastic pipe to partially set the plastic pipe without excessive cooling thereof; said second stage including a separate cooling

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circuit and control arrangement and continuing to remove heat from the pipe to further set the plastic pipe; said first stage being separately, controlled to be responsive to changing conditions of said first stage to maintain the first stage within a first temperature range which cools the pipe without damage from excessive cooling and reduces the temperature of the plastic pipe (i.e., it is well within an artisan of ordinary skill to vary the heat exchange to achieve a desired cooling effect with the pipe dependent upon the processing conditions); and wherein said cooling plug is divided into two separate cooling plug sections corresponding to said first stage and said second stage, the plug sections are independently controlled to vary the heat exchange of the different plug sections (i.e., figs. 1 and 4; col. 1, lines 42-54; col. 2, lines 39-51; col. 4, lines 22-38).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the cooling plug of Lupke et al. (US 4,510,013) with the cooling plug of Chan et al. (US 4,789,327) because such a modification would provide a plug that can vary heat exchange at different plug sections and/or because Chan et al. (US 4,789,327: col. 4, lines 39-44) discloses that the different section cooling plug can be used in the apparatus of Lupke et al. (US 4,510,013).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lupke et al. (US 4,510,013) in view of Chan et al. (US 4,789,327) as applied to claims 1, 2 and 4 above, and further in view of Jarvenkyla (US 4,865,797).

Jarvenkyla (US 4,865,797) discloses a cooling plug 9 having a groove 17 which acts as a thermal barrier between a warm section and a cold section of the cooling plug (col. 3, lines 49-53).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the cooling plug with grooves between sections of different temperatures because such a modification would provide thermal barriers between sections of different temperature to prevent heat transfer between the sections, as disclosed by Jarvenkyla (US 4,865,797).

11. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lupke et al. (US 4,510,013) in view of Chan et al. (US 4,789,327) as applied to claims 1, 2 and 4 above, and further in view of Wieder et al. (US 6,312,628).

Wieder et al. (US 6,312,628) disclose means for providing circulating cooling water to cooling channels 18 of an element to be cooled, the means including a temperature sensor 64 for monitoring the temperature of the element, a variable control valve 14 for adjusting the flow of the cooling water circulated through the cooling channels 18 in accordance with the temperature sensor 64, a reservoir 32 of cooling water to be circulated through the cooling channels 18, the reservoir 32 including a temperature sensor 40 and a chilling arrangement 36 for maintaining the temperature of the cooling water within a predetermined range, and a pump 42 and control arrangement 64, 22 for circulating sufficient cooling water through the cooling channels 18 to cool the element as desired (i.e., cols. 9-13; figs. 1, 3 and 5).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to further modify the system with the means for providing circulating cooling water of Wieder et al. (US 6,312,628) because such a modification would supply cooling water to the cooling plug which means are known in the cooling water supply art, as disclosed by Wieder et al. (US 6,312,628), and because Chan et al. (US 4,789,327: i.e., col. 2, lines 39-51) disclose that an independent cooling water supply should be connected to the different sections of the cooling water plug to vary the intensity of heat exchange of the different sections.

***Allowable Subject Matter***

12. Claims 9-13 are allowed.

13. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or reasonably suggest the pipe molding system as disclosed by instant claims 9-14, particularly the first wall portion which travels over and is in contact with said cooling plug and the second wall portion which travels over and is spaced outwardly away from said cooling plug, the first wall portion transferring heat directly to and providing the first temperature control to prevent excessive plug cooling as the first wall portion travels over the cooling plug, said system including the second temperature control which operates to replace the first temperature



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control in preventing the excessive plug cooling as the second wall portion of the pipe wall travels over the cooling plug.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lupke (US 4,770,618) and Holso et al. (US 5,139,730) are cited as of interest to show the state of the art.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH LEYSON whose telephone number is (571)272-5061. The examiner can normally be reached on M-F 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert B. Davis/  
Primary Examiner, Art Unit 1791  
3/20/08

/J. L./  
Examiner, Art Unit 1791